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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,933	07/06/2000	Frederick Herbert Raab	GMRR PA00-3	5138

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EXAMINER

SHINGLETON, MICHAEL B

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 01/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 09-610,933
 Applicant(s) Road
 Examiner MICHAEL B SHINGLETON
 Group Art Unit 2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-59 are pending in the application.
- Of the above claim(s) 10-12, 20-27, 47-55 are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-9, 13-19, 23, 34, 37, 38, 40, 41-45, 56-59 are rejected.
- ☒ Claim(s) 28-31, 32, 55, 36, 39, 46 are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 2
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

DETAILED ACTION

Applicant's election of Species 3a in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 4, 7, 13, 17, 34, 40-45, and 56-59 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bartlett et al. 6,232,841 (Barlett).

Figure 3a of Barlett discloses an electronically tuned radio-frequency power amplifier having a power amplifier Q1 with an intermediate output applied to an electronically tuned output network 102. The tuned output network 102 includes a tuning input 3 and at least two reactive components L1-3 and C1-6. The reactive components are adapted to be electronically tuned to a selected frequency by the tuning signal applied to the tuning input. The reactive components can be "micro-electromechanical devices (See column 4, around line 7). Various claims recite that the output network is adapted to produce a modulated signal at the network output. As

Bartlett utilizes a RF signal for wireless communication this signal is seen as being modulated and thus the "RF OUTPUT" is a modulated signal produced by the output network.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 5-6, 8, 9, 14, 15, 16, 18, 19, 33, 37, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartlett et al. 6,232,841 (Bartlett).

Figure 3a of Bartlett discloses an electronically tuned radio-frequency power amplifier having a power amplifier Q1 with an intermediate output applied to an electronically tuned output network 102. The tuned output network 102 includes a tuning input 3 and at least two reactive components L1-3 and C1-6. The reactive components are adapted to be electronically tuned to a selected frequency by the tuning signal applied to the tuning input. Claims 14, 15, 16, 18 and 19 recite various forms of art recognized equivalent variable capacitance. Namely, the use of a transistor, a pin diode, a capacitor with variable-dielectric material or a piezo-electric controlled variable capacitance device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide any one of the above variable capacitors of the variable capacitor of Bartlett as these above mentioned elements are art recognized equivalents to that of Bartlett.

Claims 3, 5 and 6 recite that the impedance of the output network is selected so that a desired optimum impedance match is achieved. Bartlett is silent on this,

however, this is merely common engineering practice and represents selecting the optimum or workable range for the system which involves but routine skill in the art.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the impedance to provide a matching condition so as to optimize power transfer and minimize reflections as is common engineering practice which also involves but routine skill in the art.

Claims 8 and 9 recite that the tuning inputs 3 are selected in accordance with a predetermined look-up table of tuning inputs. The use of a look-up table is a common arrangement in control systems to set the proper control signal for a specified input.

Thus it would have been obvious to utilize a look-up table in the control circuit of Bartlett so as to set the proper control signal value as is well known in the art.

Claim 33 recites a "drive level adjuster" to adjust the magnitude present at the input of the power amplifier. This is well known and can take many well known forms like a driver amplifier or a variable attenuator. The use of these elements are known to those of routine skill for providing the proper level to drive the power of final amplifier.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a "drive level adjuster" so as to provide the proper drive signal amplitude as is well known in the art.

Claims 37 and 38 recite a bias arrangement that is set for optimum operation of the power amplifier. Bartlett does not show a bias arrangement but Bartlett must have a bias arrangement to properly bias the amplifier into the proper operational region as is known in the art. It is a common engineering principle and to optimum the bias is

merely setting forth the workable or optimum range which involves routine skill in the art.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the necessary bias arrangement for the amplifier of Bartlett so as to bias the amplifier in the proper region of operation as is well known and to set the value to be optimum as this involves but routine skill in the art.

Allowable Subject Matter

Claims 28-32, 35, 36, 39, 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 28-32 and 39 recite a controller that has frequency, impedance and modulation inputs that are not taught nor suggested by the prior art of record. The prior art of record also does not disclose or suggest the use of thresholds as recited by claim 35, or a controller that converts a modulation input to tuning signals applied at a filter placed on the output of the final amplifier, or the use of an amplitude modulator providing the signal to the filter placed on the output of the final amplifier.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sokal et al. 3,919,656 discloses the use of a variable filter on the output of a power amplifier.

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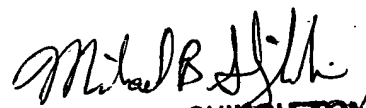
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is 703-308-4903. The examiner can normally be reached on Monday-Thursday from 8:30 to 4:30. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (703) 308-4909. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

MBS

January 17, 2002


MICHAEL B SHINGLETON
PRIMARY EXAMINER
GROUP ART UNIT 2817